

LOVE CANAL 1999 ANNUAL REPORT

**Miller Springs Remediation Management, Inc.
Niagara Falls, New York**

FOREWORD

The 1999 Love Canal Annual Report is submitted pursuant to Section 2.C. of Appendix B of the Consent Judgment between Occidental Chemical Corporation (OCC) and the State of New York, effective October 7, 1994. It covers those developments and activities that occurred in the 1999 calendar year. This is the fifth Annual Report issued by OCC. Annual Reports prior to the 1995 calendar year were issued by the New York State Department of Environmental Conservation (NYSDEC).

Effective July 1, 1998 site operational responsibility for the Love Canal site was assigned by Occidental Chemical Company to Miller Springs Remediation Management, Inc. (MSRM), a Glenn Springs Holdings, Inc. (GSHI) affiliate. GSHI is a subsidiary of Occidental Petroleum Corporation.

For further information regarding the developments and activities at Love Canal, please contact:

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SUMMARY

Responsibility for site operations and control passed from the NYSDEC to OCC on January 5, 1995; MSRM currently manages the site on behalf of OCC. The Site has been reclassified by the NYSDEC as Class 4 since January 12, 1995; this classification applies to a site that has been properly closed and requires continued management. Operations and activities in 1999 were routine in nature. The collection system has maintained inward gradients and has been effective in preventing chemical migration. The treatment facility has met all conditions of the sewer use discharge permit.

LOVE CANAL LEACHATE COLLECTION AND TREATMENT

The City of Niagara Falls issued a wastewater discharge permit to Occidental Chemical Corp on January 5, 1995. In 1998 the permit was modified to include the treatment of leachate water from the 102nd Street Landfill. In March of 1999, a modification to the discharge permit was granted to accommodate additional flow from the 102nd Street Site; maximum flow was increased from 100,000 gallons/day to 300,000 gallons/day. In March of 1999 leachate began pumping from 102nd Street into the Love Canal collection system in the south end of the facility. The four-well system at 102nd Street transferred a total of 1,778,200 gallons to Love Canal (PC3) where it was then batch treated along with the Love Canal ground water.

The Love Canal Leachate Treatment Facility met all discharge requirements of the City permit during the year. The leachate collection system continued to function as designed, drawing groundwater toward the underground drain system from both the landfill and the surrounding area beyond the cap.

1999 LOVE CANAL TREATMENT FACILITY

- Treated 4,372,300 gallons of groundwater, including 1,778,200 gallons from the 102nd Street Landfill.
- Shipped 2,574 gallons of NAPL off-site for disposal.

OPERATION AND MAINTENANCE ACTIVITIES

During 1999, the following operation and maintenance activities were performed.

- Completion from prior year (1998) of a new process control software program (Fix-32 from Intellution).
- Computer system control upgrades completed to include the 102nd Street Landfill site.
- Clarifier clean out and inspection of wall integrity.

- Clarifier upgrades of the NAPL transfer line to NAPL storage tank, which included isolation valves and a clean out flange.
- Clarifier re-piping and upgrade to stainless steel lines within the clarifier system airlift station for NAPL transfer.
- Replacement of bottom discharge valves on one Main Carbon Bed and the Carbon Transfer Tank.
- Completion of linking the 102nd Street landfill leachate line into the Love Canal treatment system (PC-3).
- Clean out of wet wells PC-1, PC-2, PC-3 (storage tank and wet well) and PC-3A (six chamber system and wet well).
- Well PC-1: Upgraded from a dry chamber pump system to a submersible pump. New submersible pump and minor piping changes were done in the wet-well;
- Well PC-2: Upgraded from a dry chamber pump system to a submersible pump. New submersible pump and minor piping changes were done in the wet-well;
- Well PC-2A: Replacement of the pump and motor (bearings in motor and pump).
- Replaced level indicators in wet wells (PC-1, PC-2, PC-3, PC-1A, PC2A & PC3A) with new submersible transducers.

THE LONG-TERM MONITORING PROGRAM

The Long-Term Monitoring Program examines hydrogeologic and chemical data from the Love Canal area in order to evaluate the overall effectiveness of the containment system. In 1999 one round of samples was collected from 39 long-term monitoring wells that surround the site. Quarterly groundwater elevations were taken in six groups of piezometers located around the site.

The 1999 data is similar to previous data gathered from 1989 to 1998, indicating that the barrier drain is functioning as designed. Both the hydrological and chemical evidence support this conclusion.